BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: May 21, 2014
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Christine Perron
Ron Crickard
Bob Landry
Pete Stamnas
Steve Liakos
David Scott
Mark Hemmerlein
Charles Blackman
Bill Saffian
Phil Brogan

Federal Highway Administration
Jamie Sikora

Army Corps of Engineers
Michael Hicks

NHDES Wetlands Bureau
Gino Infascelli

NH Fish & Game
Carol Henderson

NHDES Watershed Management Bureau
Ted Diers

NHDES Dam Bureau
Chuck Corliss

McFarland Johnson
Vicki Chase
Josh Lund

Provan & Lorber
Timothy Grant

Normandeau Associates
Jameson Paine
Rick Simmons

Hoyle, Tanner & Associates
Matt Low

(When viewing these minutes online, click on an attendee to send an e-mail)

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:
(minutes on subsequent pages)

(When viewing these minutes online, click on a project to zoom to the minutes for that project)

NOTES ON CONFERENCE:

Finalization of April Meeting Minutes

The April 16, 2014 meeting minutes were finalized.

Warner, non-federal, 27650

Tim Grant provided an overview of the project, which will involve replacing a failed roadway culvert, NHDOT Br. No. 177/127 in the town of Warner, carrying Bartlett Loop Road (Old Pumpkin Hill Road) over Willow Brook.

Bartlett Loop Road and Pumpkin Hill Road meet at a tangential intersection approximately one and a half miles north of Main Street (NH Route 130). In the late 1970s, the Town of Warner installed an 8' wide by 6'-9" tall metal plate culvert to carry Bartlett Loop Road over Willow Brook. In April of 2012, flood waters overflowed the culvert and washed the roadway and culvert fill downstream. This flood appears to have been a Q100 flood event, or greater, as determined by comparison with similar flood events across the State at that time. The crossing had been closed about a year earlier, due to the poor condition of the metal plate arch, which had experienced significant loss of the bottom section.

The existing Town Right of Way (ROW) on Bartlett Loop Road is fairly narrow, at two and a half rods or forty-one and a quarter feet (41.25') wide. It was originally a part of Pumpkin Hill Road, before the establishment of the adjacent State Forest. Bartlett Loop Road now serves a small number of full-time residences and the Warner Fish & Game Club, which is located very near the washed-out crossing of current interest. The residences and land accessed by this crossing of Willow Brook can also be accessed from the northern end of Bartlett Loop Road, which also crosses Willow Brook and intersects with Pumpkin Hill Road.

No traffic counts have been performed within close proximity to the project site. It is expected that most vehicular traffic at this site consists of passenger cars, with occasional heavy trucks delivering fuel oil, carrying logs or concrete and Town maintenance vehicles (plows). The Average Annual Daily Traffic count is expected to remain at less than 250 for the next 10 years.

It is expected that the new bridge and rebuilt roadway will remain within the existing ROW, except at the intersection with Pumpkin Hill Road. In order to improve the sight distances and general roadway safety, it is proposed to change the alignment of the intersection of Bartlett Loop Road to a nearly ninety-degree angle by moving it slightly up hill on Pumpkin Hill Road. The roadway design for Bartlett Loop Road includes a 20 foot wide road paved with asphalt (2" base course and 1" top course), with 2 foot wide shoulders on each side, for a total width of 24 feet. Roadway drainage is expected to be adequately handled by sheet flow.

Bridge types to be considered for this site include a precast concrete rigid frame, a CIP concrete deck on steel girders or precast concrete voided slabs ("butted deck beams") resting on standard or pile-supported abutments. Preliminary estimates of cost for each indicate that the most economical structure type will be a precast concrete rigid frame.

The span of bridge selected is based on the NH Stream Crossing Guidelines, which recommends a span twenty percent larger than the width determined as "bankfull" for the stream, and based on the stream flow area required to pass the NHDOT-specified flood flow (Q50) with a foot of freeboard. "Bankfull" width has been determined by examination of the stream banks and can be seen to be well within the delineated wetland limits. The proposed crossing cross-section diagram shows that the width proposed to meet the

Stream Crossing Guidelines will pass all flood flows analyzed, including the Q100 and Q500 flood volumes with room to spare.

Soil borings were made on both sides of the Brook to determine the character of the natural foundation materials in the vicinity of the proposed abutments. Based on the borings, a layer of structural fill will be required under spread footings placed five feet below grade to get below the local frost line. The proposed crossing will remain within the existing Right-of-Way except for a small area on each side of Bartlett Loop Road where the wingwall extends onto the adjacent property belonging to the Warner Fish & Game Club on the northwest corner and at the southeast corner, which currently belongs to the Town of Warner. The latter corner will require an easement or granting of ROW by the Town. The span and position of the crossing as shown will require keeping the stream in its existing location either within the existing culvert or in a temporary culvert. The newly-restored stream banks will be made to model the existing upstream geometry, as shown on the attached sketches.

Wetland areas to be impacted will be the area of removal of the existing, failed culvert and the adjacent streambed reconstruction at the new abutments and wingwalls. The NH Natural Heritage Bureau issued their report for the project (NHB File ID: NHB14-1033) that indicates no recorded occurrences for sensitive species near the project area. There are no other environmental issues related to the replacement of Bartlett Loop Road Bridge and the associated approach roadway work.

Gino Infascelli asked what was delineated for the wetland boundaries. T. Grant clarified that the delineation was performed by a Certified Wetland Scientist using the standard delineation criteria. Subsequent to the meeting, the Certified Wetland Scientist confirmed with T. Grant that the wetland delineation line was "the first slope break above observed indicator species."

G. Infascelli asked when the delineation was completed. T. Grant replied that he wasn't sure, but probably before the ground cover went brown.

Carol Henderson asked if the Consultant would decide what type of structure is used or if the Town would have input on alternatives? T. Grant replied that the decision is the Town's to make, in consultation with their Engineer and the NHDOT Bureau of Planning and Community Assistance. T. Grant and Steve Liakos have discussed the project and expect that the Town will choose the least expensive alternative, which is the 3-sided precast concrete frame, as shown in the handout. S. Liakos noted that the DOT has not yet reviewed the alternatives, and T. Grant clarified that would occur after Pathways submits the Preliminary Engineering Report for review.

Mike Hicks asked when construction was planned. T. Grant said that the Town would like to advertise the project at the end of June, although that would require an aggressive schedule at this point. S. Liakos noted that, before the project could be put out for bid, there are several stages of review that are still required that would not likely be completed before the end of June. T. Grant commented that, in that case, the project would likely be bid this Fall for construction in the Spring of 2015.

M. Hicks asked if the State Division of Historical Resources had been contacted about this project. T. Grant replied that the Request for Project Review was submitted to the NH Division of Historic Resources with the Archeologist's Report. The Archaeological Survey concludes there are no impacts. This is a heavily disturbed site and the project is staying primarily in State and Town existing ROW.

M. Hicks asked if there would be any volume loss in the 100-year floodplain. T. Grant stated that there would be no loss of floodplain. The proposed structure would increase the width of waterway and not cause any backwater. The existing culvert handled the calculated Q100 flow volume, as shown on the

diagram in the handout, but without any headroom. The proposed twenty-four foot span would have clear cover for even the calculated Q500 flow volume.

M. Hicks asked if there a check of the Federal list of Endangered Species. T. Grant stated that the NH Natural Heritage Bureau reviewed their database and returned a letter of no endangered species in the vicinity of the project. M. Hicks asked if the Natural Heritage Bureau report included the small whorled pogonia. T. Grant commented that it was not listed in the report. M. Hicks noted that the US Fish & Wildlife Service IPaC website should be reviewed in addition to coordination with NH Natural Heritage Bureau.

Carol Henderson asked if the proposed structure would have an open bottom. T. Grant replied that the plan is to provide a stream bottom similar to the existing natural waterway.

C. Henderson asked if there was a plan for the land where the existing road will be abandoned. T. Grant said that there has been some discussion with the landowner (the Warner Fish & Game Club) about using it for a gravel parking area, but there is no specific plan in place at this time.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Conway, X-A001(161), 15864

Bill Saffian provided an overview of the project. The project proposes to replace Conway Bridge 158/137, which carries US Route 302 over Conway Lake Outlet. The bridge, constructed in 1955, is a 3-span concrete T-beam with a total length of 105'. The bridge has an out-to-out width of 33'. The bridge has two column bents, each with 3 columns with dimensions of 2' by 2'. The overall condition rating of the deck, superstructure, and substructure is 4, and the bridge is on the NHDOT Red List. The width of the channel under the bridge (from OHW to OHW), and the bankfull width, is approximately 40'. The width of the streambed under the bridge (from toe of slope to toe of slope) is 33'.

The Department is proposing a single span bridge located approximately 20 feet to the north of the existing bridge. The proposed bridge would be 43' wide with a span of 120'. Construction would be completed in three phases. The existing piers would be removed to 2' below the streambed. The stone slopes would be retained, and additional stones would be added to the north. The shelf would be constructed in the stone at each abutment at approximately elevation 420'.

The project will result in a total disturbance area of 102,743 sq.ft. The existing area of impervious surface is approximately 1.03 acres. The project as proposed would result in 1.176 acres of impervious surface, a net increase of 0.14 acres. A drainage swale for treatment of stormwater runoff is proposed to the west of the bridge on the north side of the road. Runoff from approximately 0.37 acres of pavement will be directed to this swale.

At this time, preliminary wetland impacts are expected to be approximately 1,555 sq ft of permanent bank impact, 164 sq ft of temporary bank impact, 378 sq ft of permanent channel impact, 203 sq ft of temporary channel impact, and 59 sq ft of permanent wetland impact. Overall impacts total approximately 2,895 sq ft of both permanent and temporary impact (this total was shown incorrectly on the meeting handout). The total length of impacts would be approximately 90 linear feet of impact to banks and 40 linear feet of impact to the channel.

Christine Perron asked Gino Infascelli if the proposed impacts could be considered protection of infrastructure and would therefore be exempt from mitigation. G. Infascelli responded that only the

protection of existing infrastructure could be exempt from mitigation requirements and that any impacts resulting from new construction would require mitigation since this would be a major impact project as a Tier 3 stream crossing.

G. Infascelli asked if the clear span would be increasing. B. Saffian replied that the span of the bridge would be increasing but the existing stone under the bridge would remain the same. G. Infascelli asked if any of the stone on the south side of the bridge could be removed to revegetate the bank on that side. B. Saffian stated that removal of stone was not planned since it is currently stable and in good condition.

Carol Henderson asked if the proposed shelf in the stone for animal crossing could be placed lower. B. Saffian explained that doing so would increase impacts since it would require removal of existing stones. G. Infascelli noted that this type of animal crossing is usually at the top of bank. Both he and C. Henderson noted that they understood the reasoning behind the proposed location of the shelf given the good condition of the existing stone and the concern with excavating the stone out just to incorporate a wildlife crossing in a more beneficial location. However, they didn't think the shelf as currently proposed would be beneficial to wildlife since wildlife is more likely to stay in vegetated areas, which in this case extend up to the roadway and not up to the proposed shelf. C. Henderson further commented that if there was a way to increase vegetation in the vicinity of the shelf, this may encourage wildlife to use it.

C. Perron stated that the Department would determine if any improvements could be made to wildlife passage. The project would return to a future meeting to discuss this issue, as well as wetland mitigation.

This project was previously reviewed on the following dates: 12/21/2011.

Lebanon, NH-Hartford, VT, A001(154), 16148

This project involves the rehabilitation of the I-89 bridges over the Connecticut River. Vicki Chase from McFarland Johnson introduced the project. The river is approximately 500 feet wide at the location of the bridge with a watershed of over 4,000 square miles, extending into Canada. The border between New Hampshire and Vermont is the low water line on the Vermont side, so the river lies entirely within New Hampshire. The New England Central railroad parallels the river on the Vermont side – the rail line is a linear historic district and an active rail line.

Josh Lund from McFarland Johnson described the existing bridges, which each have six spans with four piers in the water and one on land (in Vermont). Piers are on piles that range from 60-120 feet deep. One pier rests on ledge. Borings will be conducted at the end of June to confirm the depth of ledge. The existing bridges are on the red list for deck and superstructure issues. The superstructures are proposed to be replaced and the bridges will be widened to fill the space between the bridges, with associated approach work. New piers and abutments are proposed between the existing foundations to support the widened superstructure. The project will be phased so that two lanes of traffic are maintained on both the northbound and southbound sides, with the new sections constructed between, and then traffic will be directed to the new center sections so that each side can be rehabilitated.

Jamie Sikora asked if the bridge would accommodate the weave lanes that may be required for I-91. Bob Landry said that a merge lane is required for the transition from I-91 NB to I-89 SB, which is currently substandard. The configuration of the weave lanes on the NB side has not been decided yet.
B. Landry noted that during the engineering study phase the option of not constructing any piers in the water was studied but it was not feasible structurally.

V. Chase reviewed natural resources. The river is well vegetated on both sides, and there are floodplain and regulatory floodways on both sides. There are some rare species and McFarland Johnson has started

coordination with both Vermont and New Hampshire. Federally endangered dwarf wedge mussels are present in the river but are over a mile away, and the US Fish & Wildlife Service had no concerns with the project.

This phase of the project involves only NEPA clearance, but in the future will require a NH State wetland permit, a Shoreland notification, and a Coast Guard permit (or coordination). It is anticipated that it will qualify under the NH Programmatic General Permit, as New Hampshire allows up to an acre of fill in navigable waters. Christine Perron recommended coordinating with the Vermont Army Corps as well. (McFarland Johnson and NHDOT will be presenting at the VTrans natural resource agency meeting on June 18, 2014.) The Connecticut River is also Essential Fish Habitat for Atlantic salmon, so some level of coordination with National Marine Fisheries Service will be required.

Mike Hicks asked if there would be additional impacts on either side of the bridge. Josh said that there could be a temporary trestle between the bridges, but that footprint would be restricted to the piles for the trestle. The total footprint of the new piers is 3,200 square feet, well below the threshold for an individual permit. The existing piers are in good condition and do not need to be replaced.

Construction is currently scheduled to being in 2018.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Hampton Falls-Hampton, non-federal, 13408B

Matt Low provided an overview of the project and its history, specifically with respect to natural resources. A Feasibility Study was completed in 2010, which contained a conceptual layout for a replacement bridge at the site of the historic channel. Final design began in August 2012. As a result of geotechnical explorations, it was decided a better location for the replacement is in its current location.

M. Low explained that the bridge and dam projects have been officially decoupled. The bridge replacement is project 13408B, while continued evaluation of the dam project will be project 13408C. NHDOT has been actively coordinating with NHDES with regard to stormwater quality during construction as well as interim modifications to the existing spillway. The design of the bridge and roadway are essentially 80% complete through the Preliminary Plans, Specifications and Estimate (PPSE) phase of design. NHDOT has also been coordinating with NH Fish & Game and the National Marine Fisheries Service with regard to spawning periods of winter flounder, alewife and blueback herring.

The project is proposed to be constructed in three seasons, starting in the spring of 2015. Advertisement would take place between January and March 2015, and completion of the project would be at the end of 2017. The fish spawning period effects two phases of bridge substructure construction.

Wetland impacts are estimated to be approximately 14,261 square feet with 7,148 square feet being temporary impacts and 7,113 square feet being permanent impacts. Tidal Buffer Zone (TBZ) impacts are approximately 125,824 square feet with 39,673 square feet being undeveloped and 86,151 being developed. There was discussion about the terms “developed” and “undeveloped.” Some areas, such as roadway slopes, shown as undeveloped TBZ on the plan may actually be considered developed.

Jamie Paine provided an update regarding the status of environmental documentation and permitting. Upcoming efforts include preparation of an Environmental Document, downstream turbidity testing to establish background levels, and preparation and submission of a Standard Dredge and Fill Permit Application.

Rick Simmons provided documentation regarding historic presence of winter flounder in the Taylor/Hampton River. It was his opinion, backed by many decades of data, that the Taylor River is not a winter flounder spawning area. Carol Henderson requested the data electronically and Normandeau agreed to provide it.

Mike Hicks asked if there was any concern with sturgeon. R. Simmons responded that sturgeon have not been identified in Hampton Harbor.

M. Hicks asked what the work in the water will consist of. M. Low responded that the intent is to work behind the existing steel sheeting and limit in-channel work. The work areas would be confined by steel sheeting to keep tidal flow out of the work area. J. Paine added that the permanent impacts quantified include the channel area, although it is only a conservative assumption. Some impact to the estuary will be necessary to tie the new channel into the existing channel. Ted Diers noted that the channel through the existing bridge is an artificial channel.

C. Henderson asked if any recent fish surveys were done. R. Simmons responded that there were surveys done in 2012 and 2013.

Christine Perron asked Gino Infascelli if mitigation would be required since this would be a Major permit. G. Infascelli responded that mitigation may be necessary. J. Paine commented that "daylighting" the median area of the bridge and restoring the fish ladder could be considered mitigation. Further discussion with NHDES would be needed to determine if additional mitigation would be necessary.

T. Diers asked if the overflow culvert was being abandoned as part of this project. M. Low responded that the overflow culvert will remain in project 13408B as it does help address some flooding concerns, but it may be removed as part of 13408C.

C. Perron noted that Rich Roach had confirmed at a previous meeting that the project could be authorized under the NH Programmatic General Permit, and she asked if M. Hicks concurred as well. M. Hicks responded that he concurred.

Carol Henderson asked about contaminated soils. C. Perron responded that contaminated sediments are within the impoundment and the current project would not be excavating any soils of concern.

T. Diers commented that NDHES and NHDOT would be continuing the discussion on the potential use of flocculants during construction. Other than that, he had no further concerns with the project.

This project was previously reviewed on the following dates: 12/19/2007, 1/16/2008, 2/20/2008, 3/19/2008, 8/19/2009, 10/29/2009, 12/10/2009, 1/16/2013, and 6/19/2013.